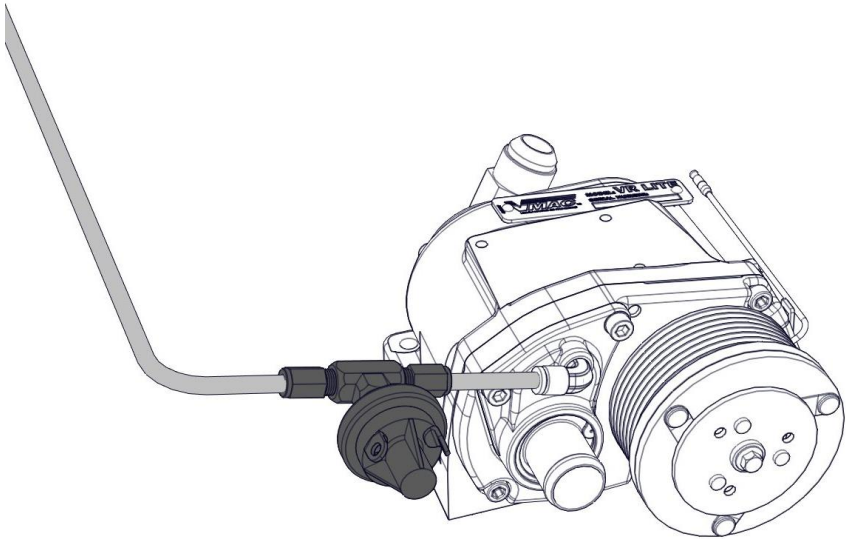


VMAC[®]
VEHICLE MOUNTED AIR COMPRESSORS
COMPACT. POWERFUL.



**Installation Manual for
VMAC Accessory**

A700248

**Underhood 30 Truck and Van Series Air
Compressor Pressure Switch Retrofit**

www.vmacair.com

Installation Manual for VMAC Accessory A700248 Underhood 30 Truck and Van Series Air Compressor Pressure Switch Retrofit

Safety	3
Warranty	4
General Information	5
Overview and Installation.....	6

Revision	Revision Details	Revised by	Checked by				Implemented
			Eng.		Tech.	Qual.	
			Mech.	Elec.			
A	Initial Release	MSP	N/A	SRD	GB	AMG	17 Aug 2017

Additional Application Information

- For use with all VMAC Underhood 30 Truck and Van Series Air Compressor Systems

Registered Trademarks

All trademarks mentioned in this manual are the property of their respective owners. VMAC’s use of manufacturers’ trademarks in this manual is for identification of the products only and does not imply any affiliation to, or endorsement of said companies.

Important Information

The information in this manual is intended for certified VMAC installers who have been trained in installation procedures and/or for people with mechanical trade certification who have the tools and equipment to properly and safely perform the installation. Do not attempt this installation without the appropriate mechanical training, knowledge and experience.

Follow all safety precautions for mechanical work. Any fabrication for correct fit in modified vehicles must follow industry standard “best practices”.

Notice

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Safety

Important Safety Notice

The information contained in this manual is based on sound engineering principles, research, extensive field experience and technical information. Information is constantly changing with the addition of new models, assemblies, service techniques and running OEM changes. If a discrepancy is found in this manual, contact VMAC prior to initiating or proceeding with installation, service or repair. Current information may clarify the issue. Any person with knowledge of such discrepancies, who proceeds to perform service and repair assumes all risks.

Only proven service procedures are recommended. Anyone who departs from the specific instructions provided in this manual must first assure that their safety and that of others is not being compromised and that there will be no adverse effects on the operational safety or performance of the equipment.

VMAC will not be held responsible for any liability, consequential damages, injuries, loss or damage to individuals or to equipment as a result of the failure of any person to properly adhere to the procedures set out in this manual or standard safety practices. Safety should be the first consideration when performing any service operations. If there are any questions concerning the procedures in this manual or more information is required, please contact VMAC before beginning repairs.

Safety Messages

This manual contains various warnings, cautions and notices that must be observed to reduce the risk of personal injury during installation, service or repair and the possibility that improper installation, service or repair may damage the equipment or render it unsafe.



This symbol is used to call attention to instructions concerning personal safety. Watch for this symbol; it points out important safety precautions, it means, "Attention, become alert! Your personal safety is involved". Read the message that follows and be aware of the possibility of personal injury or death. As it is impossible to warn of every conceivable hazard, common sense and industry standard safety practices must be observed.



This symbol is used to call attention to instructions on a specific procedure that if not followed may damage or reduce the useful life of the compressor or other equipment.



This symbol is used to call attention to additional instructions or special emphasis on a specific procedure.

Warranty

VMAC Standard Warranty (Limited)

For complete warranty information, including both VMAC Standard Warranty (Limited) and VMAC Lifetime Warranty (Limited) requirements, please refer to our current published warranty located at:



www.vmacair.com/warranty

If you do not have access to a computer, please contact us and we will be happy to send you our warranty.

VMAC's warranty is subject to change without notice.

VMAC Lifetime Warranty (Limited)

A VMAC Lifetime Limited Warranty is offered on the base air compressor only and only on UNDERHOOD, Hydraulic Driven, Transmission Mounted, Gas and Diesel Engine Driven Air Compressors, Multifunction Power Systems, and other products as defined by VMAC, provided that (i) the purchaser fully



completes and submits a warranty registration form within 3 months of purchase, or 200 hours of operation, whichever occurs first; (ii) services are completed in accordance with the Owner's Manual; (iii) proof of purchase of applicable service kits are made available to VMAC upon request.

The VMAC Lifetime Warranty is applicable to new products shipped on or after 1 October, 2015.

Warranty Registration

The VMAC warranty registration form is located near the back of this manual. This warranty registration form must be completed and sent to VMAC at the time of installation for any subsequent warranty claim to be considered valid.

There are 4 ways the warranty can be registered with VMAC:

Online

www.vmacair.com/warranty

Email

warranty@vmacair.com

Fax

(250) 740-3201

Mail

VMAC - Vehicle Mounted Air Compressors
1333 Kipp Road, Nanaimo, BC, Canada V9X 1R3

General Information

Optional Equipment Compatibility

Whilst VMAC strives to design systems compatible with optional OEM equipment (such as running boards), it is impractical to develop systems that accommodate every OEM and aftermarket option or add-on. Whenever possible, VMAC endeavors to advise of compatibility issues in the “Additional Application Information” section of the manual. Even when specific optional equipment is determined by VMAC to be incompatible, it does not preclude the vehicle upfitter or end user from modifying the optional equipment to make it compatible with the installed VMAC system. VMAC does not warranty or accept responsibility or liability for the fitment, function or safety of any products modified in any way not expressly outlined in the installation manual.

Before Starting

Read this manual prior to attempting installation to ensure familiarity with the components and installation requirements.

Ordering Parts

To order parts, contact a VMAC dealer. The dealer will ask for the VMAC serial number, part number, description and quantity. Locate the nearest dealer online at www.vmacair.com/dealer-locator or call 1-877-912-6605.



Torque Specifications

All fasteners must be torqued to specifications. Use manufacturers' torque values for OEM fasteners. **Apply Loctite 242 (blue) or equivalent on all engine mounted fasteners.** Torque values are with Loctite applied unless otherwise specified.

STANDARD GRADE 8 NATIONAL COARSE THREAD								
Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Foot-pounds (ft•lb)	9	18	35	55	80	110	170	280
Newton meter (N•m)	12	24	47	74	108	149	230	379

STANDARD GRADE 8 NATIONAL FINE THREAD					
Size	3/8	7/16	1/2	5/8	3/4
Foot-pounds (ft•lb)	40	60	90	180	320
Newton meter (N•m)	54	81	122	244	434

METRIC CLASS 10.9						
Size	M6	M8	M10	M12	M14	M16
Foot-pounds (ft•lb)	4.5	19	41	69	104	174
Newton meter (N•m)	6	25	55	93	141	236

Table 1 – Torque Table

Overview and Installation



Confirm that the system is depressurized and has cooled prior to performing any service work.

Overview

Engaging the compressor clutch prior to the system blowing down will cause extreme wear to the compressor system. This pressure switch retrofit for the Underhood 30 Truck and Van Series Air Compressor systems prevents the compressor clutch from engaging before the system has blown down sufficiently in applications that rapidly cycle air demand. The switch acts as a safety feature, preventing the clutch from engaging before the compressor blowdown cycle is complete.

Installation

- Cut the 1/4 in PTFE tube in a location close to the compressor but where the pressure switch will not interfere with the engine or compressor components (Figure 1).

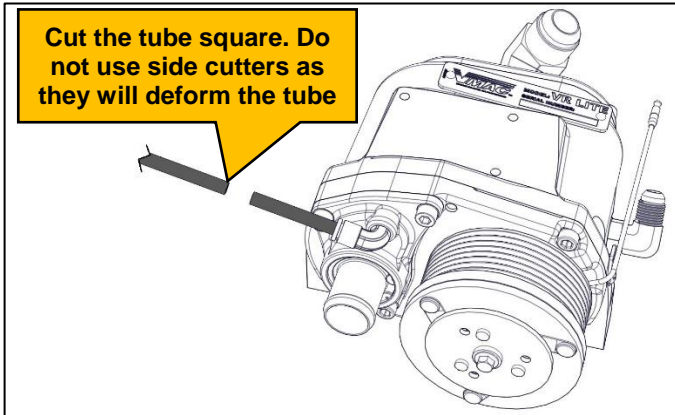


Figure 1 – Cut PTFE tube



Lubricate the tube and firmly push it into the fitting so that the tube fully seats in the fitting. Slide the collet out, away from the body of the fitting to lock the tubing in place. Ensure the tube does not have any 'play' to prevent the O-ring from wearing.

Cut the tube square. Do not use side cutters as they will deform the tube

Slide the collet out once the tube is fully inserted

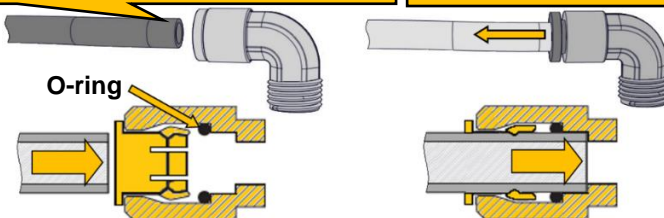


Figure 2 – Push-to-connect fittings

- Secure the pressure switch using cable ties to prevent movement.
- Install the PTFE tubes into the pressure switch (Figure 3).

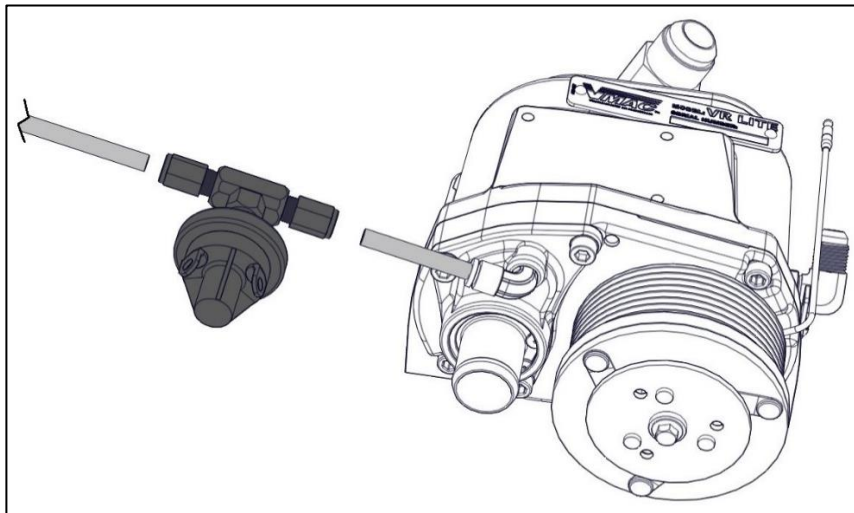


Figure 3 – Install the pressure switch

- Unplug the yellow wire from the WHASP Tank pressure switch and the throttle control.
- If the yellow wire running between the WHASP Tank pressure switch and the throttle control will be left in place, terminate it at both ends; otherwise discard it.
- Unplug the bullet connector between the clutch and the white clutch wire running from the WHASP Tank and install the pressure switch retrofit wire harness in line.
- Route the 2 white wires forward toward the pressure switch.



Ensure the wires are routed or secured to avoid hot, sharp, or moving components and are sufficiently protected from abrasion.

- Cut the white wires on the pressure switch harness to the appropriate length to reach the pressure switch terminals.
- Crimp the supplied ring terminals onto the white wires on the pressure switch harness.
- Connect the ring terminals to the pressure switch (the polarity does not matter).
- Route the green wire to a suitable chassis ground and cut the wire to the appropriate length.



To confirm a good ground, use an ohm meter to measure the resistance between the ground point and the battery negative terminal. Resistance should be less than 1 Ω.

- Crimp the supplied ring connector to the green ground wire and secure it to the selected ground location.
- Route the yellow wire through the firewall to the throttle control.
- Cut the yellow wire to the appropriate length and attach the supplied bullet connector and connect the yellow wire to the throttle control.
- Apply the supplied high temperature loom to the harness and secure as necessary to ensure it cannot come into contact with hot, sharp, or moving components.
- Test the system to verify the throttle connection is sound.



All hoses, tubes and wires that are installed, rerouted or shifted during installation must be secured so that they do not contact sharp, hot or moving parts. Use rubber coated P-clips or cable ties wherever possible

Manufactured by



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